# FARM AND GARDEN.

### STRIKING AN AVERAGE.

fraction on Good and Bad Roads Scien-

tifically Considered. demonstrate their utility.

Har conditions will give a basis for sharpened stick or post to the board, or als for road covering.

Experiments have been made by In this country (northwestern Chio),

tained by the use of a dynanometer, given line and by looking across the The roads were practically level and a other way you have a right angle, and speed of about three-quarters miles by setting stakes in range you can run per hour was used in making the ob- as many angles as you choose.

The roads were newly constructed got it from a Scotchman named and in fair condition.

A four-wheeled wagon, 21/2-inch tire,

The weight of the load, including wagon, was one ton. The tractive force is given in pounds

source as Error an Iron	(EEEE/ADV)
Find of Road.	Tractive Force
Cubical block	
Macadam, small ston Gravel, unpacked	e
Gravel, unpacked Gravel, packed	10
Telford	
Common earth, packs Common earth, unpack	
Common earth, packe	
Steel rails with locom	
A constant experience was	as be and the control as of radio

A good average-trained horse weighing not less than 1,000 pounds, well fed and treated, when actually walking 25, miles per hour, can exert a tractive force of 100 pounds.

From the above table we see one horse can draw approximately three tons on a plank road, 2½ tons on cubical blocks, one ton on packed gravel of packed earth, one-half to one-fifth ton on unpacked earth dry and one-third to one-fourth ton on packed earth after

The exceedingly low tractive force on steel rails explains the assertion often made that it is often cheaper to hani freight by rail from points in the Mississippi valley to the seaboard than atdeliver it from the farm to the railway station.

This is especially true during hard Results of Experiments at the Danish Exwinters, when all farm products are higher than at any other time and more in demand.



conditions, and it is not often that the one is selected that offers the least resistance to traction.

The kind of material at hand, its durability, the kind of traffic to be necommodated, all enter into the question of selection,

The use of material that will insure a permanent, smooth surface, wet or dry and unaffected by frosts, heddes being obtained at reasonable price, is to be commended.

While the results given above are conroximate, as the exact tractive force varies over the same road, probabl. every day in the year, and very probably no two roads are exactly the same, yet they are a fair average and the commission firm saying that the believed to be reliable for basing con-Rural World.

## OF NATIONAL INTEREST.

## Means a Local Issue.

There is not a man, woman or child in the land that has not a personal interest in the question of better roads. There is no article produced, imported or exported, the cost of which is not the butter will soften it so it will not in some degree affected by the character of the common roads over which hard fats and brittle body is the lack it is transported from the field, the of fresh cows. When the strippers are noine, the mill or the shop to the user or consumer, and the worse the roads over this trouble disappears. Stearine futs which it is transported the less it predominate in strippers' milk as yields the producer, and the more it costs the user or consumer; and the and more warmth is required to soften loss thus borne year after year by the the hard fats in either case, but the entire people of the nation is so enor- butter cannot be made quite so good meus that it cannot be reasonably ap- anyhow, as butter from fresh cows' proximated. It costs less to transport milk.-Rural Life. commodities across the continent by rail, or from continent to continent by water, than it does over a single mile of our common roads during nearly half farming, trees give the advantage of the the year.

Bad roads do not pay. When the people realize this, the question becomes a national one.-Wm. H. Rhawn, in Southern Cultivator.

Attributes of a Good Farmer. The Southern Farm Gazette asserts that no man is a good farmer who does not at least maintain year in and year out the average productiveness and fertility of his farming lands. It is rothing. The ground while best if kept not a hard thing to do this either for eny intelligent farmer. Little better can be expected of an ignorant negro made runs for calves, shoats, poultry, tenant than to make it his invariable rule to squeeze out of the soil all that | break to a homestead.-American Gar the soil will bear, paying back nothing | dening. in the way of plant food for future crops, practicing the plan of soil robtery as a matter of course, but we surely expect better things of intelligent white farmers and land owners. tween two farms.

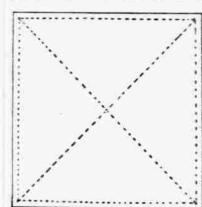
## A FARMER'S COMPASS.

Cittle Implement That Is Useful for a Variety of Purposes.

Inclosed please find a diagram of a farmer's compass, a little implement which I find very handy in setting Aside from the comfort, convenience | buildings, squaring up fields, etc. Take and pleasure of good roads, their com- a pine board is or 20 inches square; lay mercial value in saving or increasing off a perfect square and put a brad in the efficiency of tractive power will each corner. Draw lines diagonally Beross so as to find the exact center, and Comparison of tractive power neces- drive a brad in it. File sharp, and be sary to draw a given load under sime sure they line up exactly. Fasten a judging the merits of different materi- and the board securely to a stake, and the implement is done.

eminent engineers on this line, and the where the land is laid off by range or results epitomized in Trautwine Engi- section, it is easy to run lines at right neer's Book and other standard works, angles to the roads. By setting the The results given below were ascer- compass so the brads will range with a

The idea is not original with me. I



FARMER'S COMPASS.

"Sandy," who said they used the same in laying off the "lands" in the plowing matches in Scotland. It is a great advantage to have the fields a perfect right angle or the sides of same para!iel, to avoid short rows. We frequently pess fields that have short rows on one side, owing to the fences not being placed as they should be. Thave lonned this tool to mechanies to set buildings. Malcolm Crockett, in Ohio Farmer,

#### PIG-FEEDING TESTS.

periment Station.

The following are the results of 36 series of trials during five years, with The final decision of what material \$50 pigs in all, separated into 175 lots, should be used in constructing a road conducted at the Danish agricultural experiment station. Whey for pigs has a greater feeding value, pound for pound, than turnips. Corn and skim milk is great stuff to make plus grow fast and fat, but the perk is rather soft, Lence substitute burley for the cora when the pigs weigh 125 pounds, and the quality of the flesh, if killed at 185 pounds' weight, will be improved, and the shrinkage is no larger. Barley alone gave better results than when untlower seed oil cake was substituted for part of it. One pound of burley equaled in pork-producing power six pounds of skim milk or 12 pounds of whey. Young pigs weighing 22 to 75 pounds required 3% pounds of grain. or its ecgivalent in milk or whey to make one pound increase; at 150 to 201 and old hegs weighing over 200 pounds | patents in this line is 20,006. consumed 6 to 61/2 pounds of grain for each pound of increase in weight. be surprised to learn that 1,137 patents The unimals are but slightly more in | have been taken out either on different winter than in summer, but it required nearly half a pound more grain feed for its manufacture. for one pound of grain in winter than in summer. There was no marked difference between the food required per pound of grain in light and heavy feed ing. Nor was there may difference between the rate or cost of grain in barrows or sows.

## FRESH COWS NEEDED.

Stearine Fats Are Bound to Predominate in Strippers' Milk.

The professional instructors in but- in plaining why a certain creamery is troubled with the body of its butter sued to subjects of the kniser is 582. body is short and brittle and erumbles putations.—Hiram Phillips, C. E., in Ladly in retailing. One says there is worked too cold, one questions if the feed did not do the bad job, etc. It is The Improvement of Roads is by No not easy for the creamery men to get to the bottom facts in all cases, as they do not know how the cows are handled A private dairyman finds that feed doceffect the hardness of the butter fats. that a warm water bath after washing be so brittle, but the main reason for dried and fresh cows take their place truly as they do when cottonseed is fed.

Economic Features of Orcharding.

When considered in connection with use of overhead space that cannot be otherwise ctilized at all. Small areas in great cities that are sold for fortunes are used to erect structures to utmost limits of corporate laws. Cut orehard trees to the ground and it will be found that they occupy as much space on the ground as in the air. The overhead space is brought into economic use. The trees can make use of space and forces in it which otherwise will avail a planter in a high state of cultivation, can be cropped with leguminous crops, and and the orchard itself made a wind-

That's What It Is Now. A country road should be something more than a weedy strip of land be-

## A CHOICE ASSORTMENT.

Greenland was so called because in summer its hills were covered with a beautiful green moss,

Official statements place the output of coal in Russia in 1893 at 459,798,690 poods, equivalent to 7,50%,278 metric tons.

A 634-karat diamond, the finest ever found in Africa, was discovered at Jagersfontein in the Transvaal on the day after Christmas. When cut it is expected that it will be worth \$1,500,000.

Count Magre, the dwarf husband of Mrs. Tom Thumb, has ordered a bicycle. His height is 30 inches, and the bicycle, which is to be made to order, will weigh less than ten pounds.

Capt. William Davis, who has just dled in Millville, Pa., at the age of 74, eireumnavigated the globe three times, and for three years and nine months was one of the crew of the old frigate Constitution.

After defeating Samuel, king of Bulgaria, at Zetanium, July 29, 1014, Emperor Basil II. blinded his 13,000 prisoners, except one in a hundred, to whom he left one eye. The king died of grief.

Marriages in the sea-side villages of Scotland depend somewhat upon the condition of the fishing. The lasses make the best "catches" just after a good fishing season, when the lads have plenty of money.

The custom of showering rice on recently wedded couples is being superseded by a more sensible proceeding. Now it is the proper thing to rain roses and other floral tributes upon the happy couples as they set forth on the honeymoon trip.

#### FOR THE FARMER.

Pear blight is not well understood, but is probably produced by an excess of sap. It shows itself usually during hot, sultry, damp season. It may show in but a single branch or in many, and at times the whole tree will seem as if seorched. Even the wood, if cut into, is often found discolored.

All kinds of coarse food can be rendered serviceable by judicious combination of the ration. Even cut straw will be eaten if the bran and oilmeal are added to it. Fodder can be made acceptable to stock by preparation, and hay may be fed with other foods, in a manner to make the whole a ration which will be relished.

Barnyard manure is rich in nitrogen and is admirably adapted to the development of wood, and while the orchard young should be applied liberally, not only for this purpose, but also for fertilizing such animal crops as may be grown with the greatest profit-depending upon the home market for facilities for shipment.

Where the cheapest production of meat is desired a small breed of hogs maturing early will give better results than any of the large breeds. The kinds of hogs that will attain 250 to 280 pounds weight in nine months are better than those which will run up to five or six hundredweight, but will require two full years to do it in.

## ABOUT PATENTS.

The greatest number of patents issued in any one line has been for devices employed in carriages, wagons and pounds, about five pounds was needed, other vehicles. The total number of

The ordinary reader will probably

According to the patent office reports there are 5.914 different kinds of

patented beds and lounges on which "tired nature's sweet restorer, balmy sleep," may be courted. The care of live stock has received close attention at the hands of the

American inventor, 3,689 appliances having been devised for the comfort and convenience of domestic animals. The natives of Germany come next order to these of England in the termaking have had a time of it in ex- matter of taking out patents in this country. The number of patents is-

Massachusetts stands next to Connecticut in the number of its inventors in proportion to population. In the too much water in it, one says it was | Day state one man in every 1.335 of the population patents something every

## THE MARKETS.

New York, March 2, 1894	X
EATTLE-Native Steers 8 4 01 668 4 45	i
COTTON-Middling 74% 73	
PLOUR-Winter Wheat 3 50 66 4 00	
WHEAT-No.4 Red 65 783	1
OATS-No 2	4
PORK—New Mess	
ST. LOUIS	
COTTON-Middling. 748 75	6
BEEVES-Fancy Steers 4 0) @ 4 70	* 1
Medium	3
HOGS Fair to Select 3 6. 65 3 92	
SHEEP-Fair to Choice 2 25 65 3 4J	
Fancy to Extra do. 280 % 3 %	2
WHEAT-No.2 Red Winter. 7146 72	
CORN complete towns maked	
Consogelsing temp relief.	-
CHECKING THE INSTITUTE CASE	
Escil & Equipmenter coffin for narrow	
Hinton & Co collins for pappers	
Spain comins for pauliers	
the Wallers Inches walled	
ie Golliher temp_relief	10.00
Ja Wills temp relief	
rs Jackson temp_relief.	1.00
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Stone temp reliel	3-4-3-4
r Fluory temp relief.	2000
177 GOCKET CORVEYING THE SOME TO A CA-	F 2 2
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HARDER COURT FOR DOOR DEPSOR	
USher During hour herson	
a Randol temp relief	
Smith labor poor faces	
KASSAS CITY.	1
	1
HOGS—All Grades 325 6 4 10	
WHEAT-No 2 Hed 74 % 745	
OATS-No. 2 5 175	4
CORN-No. 2 U Dis	4.5
NEW ORLEANS	1

NEW ORLEANS

NEW ORLEANS
FLOUR-High Grade \$ 70 65 4 00
CORN-No. 2 34 465 25
UATS-Wester 2 25 55 25 18 70
PORK-New Mess 6 10 0
BACON-Sides 5 75
COPTON-Middling 5 75
WHEAT NO. 2018 70 75 75 75

LOCISVILLE
WHEAT—No. 2 Red. 7419 2 551
OURN—No. 2 Mixed 3016 314
OATS—No. 2 Mixed 2257 234
PORK—New Mess. 10 00 6 10 21
BACON—Clear Rib 5145 654
COTTON—Midding 6

SMOKE YOUR MEAT WITH KRAUSERS LIQUID EXTRACT OF SMOKE

#### SCARLET FEVER SETTLED IN THE BACK.

An Operation Was Unsuccessfully

Performed.

The Patient Was Finally Restored, After Eighteen Years.

From the Evening News, Newark, N. J. About eighteen years ago, when Mrs. Annie Dale, of 88 Bruce Street, was a bright, merry school girl, she was taken ill with scarlet fever. She recovered, but she was a very different girl from a physical standpoint. She was cured of the scarlet fever, but it left her with an affection of the back. As she grew older the pain seemed to in crease. Her sufferings were intensified by her household duties, but she never com-plained, and with one hand pressed tightly to her back she did her work about her cozy home.

"I was fourteen years old when I was attacked with scarlet fever, zad have now suffered with my back for eighteen years. "Night and day I suffered. It really

seemed as if I must succumb to the pain, and then to make matters worse, my head ached so badly that I could scarcely see at ached so badly that I could scarcely see at times. Finally I went to St. Michael's Hos-pital, at the corner of High Street and Cen-tral Avenue, and there the surgeons per-formed a difficult operation on my back, but it did no good: it was like everything else. I was told at the hospital to return for an-other operation, but the first had left me so weak I could not go back. Then sgain I had become discouraged and my three chil-dren needed my attention and care at home dren needed my attention and care at home The pain became harder to stand and my back was almost broken, it seemed. I thought I would never know what it would be like to be well again when I was told to try Dr. Williams' Pink Pills. With many try Dr. Williams' Pink Pills. With many doubts, a faint heart and an aching back I went to get the pills, and little dreaming that they would prove the clixir of a new life to me, I began to take them. Only a short time clapsed before I began to improve. Could it be possible that Dr. Williams' Pink Pills were doing what everything else had failed to accomplish? I asked myself the question many times and before long I was enabled by my improved condition to answer the query with an emphatic long I was enabled by my improved condi-tion to answer the query with an emphatic 'Yes.' Now the pain of almost twenty years is cured by these Pink Pills in a few months. I have no pain of any kind now, but I have got some of Dr. Williams' Pink Pills for Pale People and while I do not think it will ever be necessary to use them again, I shall certainly never be without them in the house."

Dr. Williams' Pink Pills contain, in a con-Dr. Williams' Pink Pills contain, in a con-deosed form, all the elements necessary to give new life and richness to the blood and restore shattered nerves. They are also a specific for troubles peculiar to females, such as suppressions, irregularities and all forms of weakness. They build up the blood, and restore the glow of health to pale and sallow cheeks. In men they effect a radical care in all cases arising from men-tal worry, overwark or excesses of what. tal worry, overwork or excesses of what-ever nature. Pink Pills are sold in boxes (never in loose bulk) at 50 cents a box or six boxes for \$2.5°, and may be had of all drug-gists, or direct by mail from Dr. Williams' Medicine Company, Schenechaty, N. Y.

THE EVIL OF RUSTRICTED LICENSE.-Old Party (sadiy)—"My pear man, why do I always fir! you hanging around this saloon?" Bibulous Bili—"I can't help meself, Mister. It's the only one in town."—Puck.

## Catarch Cannot Be Cured

with local applications, as they cannot reach the seat of the disease. Catarrh is a blood or constitutional disease, and in order to cure it you must take internal remedies, Hall's Catarrh Cure is taken internally, and acts directly on the blood and macons surfaces. Hall's Catarrh Cure is taken internally, and acts directly on the blood and macons surfaces. Hall's Catarrh Cure is not a quack medicine. It was prescribed by one of the best physicians in this country for years, and is a regular prescription. It is composed of the best lonies known, combined with the best blood purifiers, acting directly on the mucous surfaces. The perfect combination of the two ingredients is what produces such wonderful results in curing Catarrh. Semi for testimonials, free.

F. J. Chener & Co., Props., Tolodo, O. Sold by druggists, price 78c.
Hall's Family Pills are the best.

"How no you sell this music paper?"
a-ked the customer at the stationery store.
"I'm not certain about it," said the new cierk, "but I think we sell it by the choir.

The Nashville, Chattanooga & St. Louis

The Nashville, Chattanooge & St. Louis Railway
Will on March 3rd seil one way homeseckers' tickets to all points in the Southeast, including Florida, at the lowest rate ever known. On March 16th round trap tickets to many points in the South, including Georgia, can be purchased at one fare plus \$2.00; round for 3rd days. For many, folders and all information write to or see Eriard F. Hill, N. P. A. 388 Marquette B&g. Chlcaro; R. C. Cawardin, W. P. A., 408 Ry Exc. Bld'g, St. Louis, or W. L. Danley, G. P. & T. A. Nashville, Tenn.

The chameieon, which is said to feed upon nothing but air, has of all animals the nimblest tongue.—Swift.

## Stop, Thief!

Stop a small malady, which is stealing your strength, before it outrons your power to arrest it, and recover what it took from to aircest it, and recover what it took from you. The safest and promptest recuperator of waning vitality is Hostetter's Stomach Bitters, which renews vigor, flesh and nerve quietude because it restores activity to those functions whose interruption interferes with general health. Use the Bitters for dyspepsia, maharial, rheumatic and kidney complaints and olliousness.

"Mayya" asked the little girl, peering in between two uncut leaves of the maga-zine, "how did they ever get the printing in there?"

Firs stopped free by Dr. Kline's Great Nerve Kestorer. No fits after first day's use. Marvelous cures. Treatise and \$2 trial bot-tle free. Dr. Kline, 931 Arch St., Phila., Pa.

Hz (gallantly)-"I couldn't kiss anyone but you, dear!" She-"If that's the case, you can't kiss me "-San Francisco Wave.

BEECHAM'S PILLS for constipation 10c and 25c. Get the book (free) at your druggist's and go by it. Annual sales 6,000,000 boxes.

TEACHER—"What was Joan of Are maid Transcript.





Brings comfort and improvement and tends to personal enjoyment when rightly used. The many, who live bet-ter than others and enjoy life more, with less expenditure, by more promptly adapting the world's best products to the needs of physical being, will attest the value to health of the pure liquid laxative principles embraced in the remedy, Syrup of Figs. Its excellence is due to its presenting

in the form most acceptable and pleasant to the taste, the refreshing and truly beneficial properties of a perfect lax-ative; effectually cleansing the system, dispelling colds, headaches and fevers and permanently curing constipation. It has given satisfaction to millions and met with the approval of the medical profession, because it acts on the Kidneys, Liver and Bowels without weakening them and it is perfectly free from every objectionable substance.

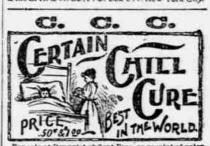
Syrup of Figs is for sale by all druggists in 50c and \$1 bottles, but it is manufactured by the California Fig Syrup Co. only, whose name is printed on every package, also the name, Syrup of Figs, and being well informed, you will not accept any substitute if offered.

# you do the mending

He wants to make as much as he can by selling you inferior bindings which he claims are "just as good" as S. H. & M. But you do the mending. Insist on having

Bias Velveteen Skirt Binding and you save the mending.

If your dealer will not supply you we will. Send for samples, showing labels and materials, to the S. H. & M. Co. P. O. Box 699. New York City.



For sale at Druggist of Sent Free on receipt of price by CERTAIN CURE CO., - Evansville, Ind. TROPICAL ...CUBA, JAMAICA...
The magnificent United
States Mail Steamships of

the PLANT STEAMSHIP LINE



The Large Piece and High Grade of "Battle Ax" has injured the sale of other brands of higher

prices and smaller pieces. Don't allow the dealer to impose on you by saying they are "just as good" as "Battle Ax," for he is anxious to work off his unsalable stock. **らついついののいいいいい** 

How Weak the soap and water seems when you begin your washing."
You don't get any strength out of it till the work is about done. Plenty of hard work and rubbing and wear and A tear, even then-but more of it at the beginning; when the water is weakest Now with Pearline, the water is just as strong at the beginning as at the end. This is one of the reasons (only one) why Pearline acts so much better than soap, in all washing and cleaning Use no soap. Do Not Accept Substitutes or Imitations.

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CABLED FIELD AND HOG FENCE. Also CABLED POULTRY, CARDEN AND RABBIT FENCE. facture a complete line of Smooth Wire Fencing and guarantee every article to be a If you consider quality we can save you money. CATALOGUE FREE. DE KALB FENCE CO., DE RALB, HAL



THE AERMOTOR CO, does half the world's windmill business, because it has reduced the cost of wind power to 1.6 what it was. It has many branch houses, and supplies its goods and repairs at your door. It can and does furthin a better article for less money than

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GURES WHERE ALL ELSE FAILS.

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